THAT CLAIMED IS:

1. An apparatus for inspecting vertically supported fluid filled pipe, comprising:

an inspection unit having a longitudinal axis and adapted to be connected to a line for lowering into and retrieving from the pipe;

a centralizer mounted to the inspection unit, having an outer periphery for slidingly contacting the pipe as the inspection unit moves through the pipe;

a rotating time of flight diffusion (TOFD) module carried by the inspection unit and including a pair of rotatably mounted weld volume inspection transducers adapted to inspect for and obtain data on weld volume defects, the weld volume inspection transducers rotating during inspection at a circumscribed diameter that is less than the diameter of the centralizer at the periphery; and

a wall thickness module carried by the inspection unit and including a plurality of wall thickness inspection transducers adapted to obtain data on wall thickness of a portion of the pipe, the wall thickness inspection transducers during inspection being located at a circumscribed diameter less than the diameter of the centralizer at the periphery.

2. The apparatus of claim 1, wherein the TOFD module further includes a rotatable shaft positioned parallel to the longitudinal axis of the inspection unit for rotating the weld volume inspection transducers, and a pair of weld volume inspection transducer mounts connected to the rotatable shaft for carrying the weld volume inspection transducers, and wherein each of the weld volume inspection transducers is connected to a separate one of the pair of weld volume inspection transducer mounts.

3. The apparatus of claim 1, wherein the TOFD module further comprises:

an annular fluid carrier positioned surrounding the weld inspection transducers, the weld volume inspection transducers rotating in sliding contact with an inner diameter of the fluid carrier.

4. The apparatus of claim 3, wherein the TOFD module further comprises:

a rigid nonrotating TOFD module housing surrounding the fluid carrier, the weld inspection transducers forcing the fluid carrier into contact with an inner diameter of the TOFD module housing while being rotated.

5. The apparatus of claim 4, wherein the TOFD module housing contains an acoustic fluid to provide a liquid coupling between the fluid carrier and the TOFD module housing.

6. The apparatus of claim 1, further comprising a pipe weld location detector module carried by the inspection unit and including a pipe weld position detector adapted to detect a position of the weld volume in the pipe.

7. The apparatus of claim 6, wherein the pipe weld location detector module further comprises a housing surrounding the pipe weld location detector module, and wherein a portion of the housing is substantially transparent around a circumference to provide for visual viewing from within the pipe weld location detector module.

8. The apparatus of claim 1,

wherein the TOFD module further comprises a rotatable drive shaft for rotating the pair of weld volume inspection transducers;

wherein the pair of weld volume inspection transducers include a TOFD transmitter transducer connected to a first TOFD mount and positioned to transmit an acoustic signal through a weld volume, and a TOFD receiver transducer connected to a second TOFD mount and positioned adjacent to and spaced apart from the first TOFD transmitter transducer along the longitudinal axis of the inspection unit and positioned to receive a portion of the acoustic signal; and

wherein each of the transducer mounts are connected to the rotatable drive shaft to provide a rotational platform for the TOFD transmitter transducer and TOFD receiver transducer for rotating in a clockwise and a counterclockwise direction.

9. The apparatus of claim 1, wherein the wall thickness module further comprises a housing having an acoustic fluid therein to provide a liquid coupling between each of the wall thickness inspection transducers and the housing.

10. The apparatus of claim 1, wherein the wall thickness transducers are fixedly mounted within the wall thickness module.

11. The apparatus of claim 1, further comprising:

an umbilical cord including a data conductor positioned between the proximal end of the housing and a controller adapted to be remotely positioned on a deployment platform; and

an umbilical cord spool adapted to be positioned on the deployment platform for storing and deploying the umbilical cord.

12. The apparatus of claim 1, wherein the TOFD module further comprises:

a pair of rotatably mounted shear wave inspection transducers adapted to inspect for and obtain data on weld root defects.

13. A system for inspecting vertically supported fluid filled drilling riser, comprising:

a body adapted to be filled with an acoustic liquid, and the body adapted to be connected to a wireline for deployment in the drilling riser;

a video module carried by the body, the video module including a video camera positioned to view an inner diameter of the drilling riser to detect a position of a weld in the drilling riser;

a time of flight diffusion (TOFD) module positioned within the body, the TOFD module including a rotatable shaft positioned parallel to a longitudinal axis of the body, a TOFD transmitter transducer connected to a first TOFD mount and positioned to transmit an acoustic signal through a weld volume, a TOFD receiver transducer connected to a second TOFD mount and positioned adjacent to and spaced apart from the first TOFD transmitter transducer along the longitudinal axis of the body and positioned to receive a portion of the acoustic signal defining a weld volume data signal, each of the transducer mounts connected to the rotatable drive shaft to

provide a rotational platform for the TOFD transmitter transducer and TOFD receiver transducer;

a wall thickness module positioned non-rotatably within the body, the wall thickness module including a plurality of fixedly mounted wall inspection transducers positioned to transmit a pulse echo signal and receive at least a portion of the pulse echo signal defining a wall thickness data signal;

a data module within the body electrically connected to the TOFD module, the wall thickness module, and the video module, and adapted to gather signal from the TOFD module, the wall thickness module, and the video module;

a centralizer connected to an external surface of the body and adapted to conform to varying drilling riser inner diameter sizes to maintain the body substantially in the center of the inner diameter of the drilling riser; and

a controller electrically connected to the data module and remotely positioned to receive data signals from the TOFD module, the wall thickness module, and the video module.

14. The system of claim 13, wherein the TOFD module further comprises:

an annular fluid carrier positioned surrounding the TOFD transmitter and TOFD receiver transducers, the TOFD transmitter and TOFD receiver transducers rotating in sliding contact with an inner diameter of the fluid carrier.

15. The system of claim 13, wherein the TOFD module further comprises:

an annular fluid carrier positioned surrounding the TOFD transmitter and TOFD receiver transducers, the TOFD transmitter and TOFD receiver transducers rotating in sliding contact with an inner diameter of the fluid carrier; and

a rigid nonrotating TOFD module housing surrounding the fluid carrier and containing an acoustic fluid to provide a liquid coupling between fluid carrier and the TOFD module housing, the TOFD transmitter and TOFD receiver transducers forcing the fluid carrier into contact with an inner diameter of the TOFD module housing while being rotated.

16. A method of inspecting a drilling riser, the method comprising the steps of:

(a) lowering the riser from a platform into seawater and allowing the seawater to enter the riser;

(b) deploying an inspection apparatus on a line into the drilling riser, the inspection apparatus including at least one acoustical transducer;

(c) centralizing the apparatus in the drilling riser with the transducer spaced inward from a wall of the riser by an annular clearance; and

(d) periodically causing the transducer to emit an acoustical signal through the seawater in the annular clearance and into the wall of the drilling riser and detecting a return acoustical signal from the wall of the drilling riser.

17. The method according to claim 16, comprising the step of disconnecting a lower marine riser package of the drilling riser from a blowout preventer and flushing an inner diameter of the drilling riser with a fluid prior to deploying the inspection apparatus.

18. The method according to claim 16, wherein step (b) further comprises placing the transducer within a housing, and wherein step (d) further comprises emitting the acoustical signal through the housing.

19. The method according to claim 18, further comprising filling the housing with a liquid and equalizing pressure within the housing with hydrostatic pressure of seawater in the riser.

20. The method according to claim 17, wherein the at least one transducer of step (b) further comprises:

a pair of weld volume inspection transducers including a TOFD transmitter transducer adapted to transmit the acoustical signal through a weld volume, and a TOFD receiver transducer positioned adjacent to and spaced apart from the first TOFD transmitter transducer along a longitudinal axis of the inspection apparatus and adapted to receive a portion of the acoustical signal, the weld volume inspection transducers rotating during inspection at a circumscribed diameter that is less than the inner diameter of the drilling riser; and

a plurality of fixedly mounted non-rotating wall inspection transducers adapted to transmit a second acoustical signal and to receive at least a portion of the second acoustical signal to determine wall thickness while deploying the inspection apparatus.

21. The method according to claim 20, wherein step (d) is performed while not rotating the wall inspection transducers relative to the housing and the drilling riser.